

REMARKS

Claims 1-32 are pending. Applicant has amended claim 7.

The Examiner has objected to the disclosure. Applicant has amended the specification to address the Examiner's concerns.

The Examiner has rejected claim 7 under 35 USC § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. Applicant has amended claim 7 to correct its dependency.

The Examiner has rejected claims 1-32 under 35 USC S 103(a) as being unpatentable based on the following combinations of references.

Claims	References
1-3, 6, 9-12, 16, 18-21, 25, and 28-32	Brunner and Koyanagi
4-5, 14-15, 23-24	Brunner, Koyanagi, and EO Target Geolocation Determination
8, 17, 26-27	Brunner, Koyanagi, and Williams
13	Brunner, Koyanagi, and Avila
22	Brunner, Koyanagi, and Abtikidis

Applicant respectfully traverses these rejections.

Brunner describes a camera system for tracking a target from an aircraft. Brunner's system receives aircraft data and target data and then generates pointing parameters for the camera and moves the camera according to the pointing parameters. To track the target, Brunner's system receives new aircraft data, generates new pointing parameters, and moves the camera.

Koyanagi describes a system from tracking an object based on the object's position with an image taken by a camera. Koyanagi's system sets a speed for the camera. If it

detects that the target is moving toward the edge of the image (i.e., using object detection techniques), then Koyanagi's system adjusts the speed of the camera so that the target will move to the center of the image.

Applicant's claims are directed to a technique for tracking a target that combines adjusting the line of sight of a camera based on an adjustment angle and adjusting the angular velocity for moving the line of sight of the camera to compensate for the current velocity of vehicle carrying the camera relative to the target. Prior techniques, such as that of Brunner's system, may result in large variations in successive calculations for the line of sight of the camera, which causes the target to jump around the image as the adjustments are made. Because applicant's technique continually adjusts the line of sight of the camera by an angular velocity in between changing the adjustment angle, then adjustment angles tend to be small resulting in less jumping of the target within the image.

Applicant is puzzled as to how Koyanagi's system could be combined with Brunner's system as the Examiner suggests. Koyanagi's system strives to keep the target within the center of the image by adjusting the speed of the camera. Thus, if Koyanagi's system was somehow combined with Brunner's system, there would be no need for Brunner's system to recalculate its pointing parameters (based on aircraft position and target position) because Koyanagi's system already keeps the target in the center the image. In other words, Koyanagi's system uses a complex algorithm to detect a target and keeps it in the center, thus, it might be used to replace the tracking technique of Brunner's system but it would not be used in addition to Brunner's tracking technique.

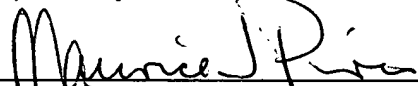
Applicant is also puzzled by the motivation that the Examiner provides for combining Brunner and Koyanagi. The Examiner states that the motivation for combining "would have been to add the ability to track objects [target] with unknown positions as taught by Koyanagi, when the current position of the aircraft is unknown." If the positions of the targets and the aircraft were unknown, the Brunner's system would not work since it relies on knowing the positions of both aircraft and the target.

It appears that the Examiner is suggesting Brunner's system and Koyanagi's system could be combined such that Brunner's system is used to track targets when both the aircraft position and the target position are known and such that Koyanagi's system is used to track targets when positions are not known. This suggested combination, however, would not render the claims obvious. In particular, such a combination would not maintain the line of sight of a camera in accordance with both the set angular velocity and the set line of sight that is based on an adjustment angle. Rather, the combination would set the line of sight based on either a set angular velocity or set line of sight depending on knowledge of location of the object and the aircraft. The suggested combination would simply use Brunner's system and Koyanagi's system to track different objects with no interaction between the systems.

Based upon these remarks, applicant respectfully requests reconsideration of this application and its early allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-8548.

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Respectfully submitted,

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